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SMALL ENTITY COMPLIANCE GUIDE

Wireless E911 Location Accuracy Requirements

FCC 20-98

PS Docket No. 07-114

Released: July 17, 2020

This Guide is prepared in accordance with the requirements of Section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996. It is intended to help small entities—small businesses, small organizations (non-profits), and small governmental jurisdictions—comply with the revised rules adopted in the above-referenced Federal Communications Commission (FCC or Commission) rulemaking dockets. This Guide is not intended to replace or supersede these rules, but to facilitate compliance with the rules. Although we have attempted to cover all parts of the rules that might be especially important to small entities, the coverage may not be exhaustive. This Guide cannot anticipate all situations in which the rules apply. Furthermore, the Commission retains the discretion to adopt case-by-case approaches, where appropriate, that may differ from this Guide. Any decision regarding a particular small entity will be based on the statute and any relevant rules.

In any civil or administrative action against a small entity for a violation of rules, the content of the Small Entity Compliance Guide may be considered as evidence of the reasonableness or appropriateness of proposed fines, penalties or damages. Interested parties are free to file comments regarding this Guide and the appropriateness of its application to a particular situation. The FCC will then consider whether the recommendations or interpretations in the Guide are appropriate in that situation. The FCC may decide to revise this Guide without public notice to reflect changes in the FCC's approach to implementing a rule, or it may clarify or update the text of the Guide. Direct your comments and recommendations, or calls for further assistance, to the FCC's Consumer Center:

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I. OBJECTIVES OF THE PROCEEDING

The *Sixth Report and Order* in PS Docket No. 07-114 builds on the Commission's efforts to enable emergency responders to determine the floor level of 911 callers in the nation's largest markets, extends existing requirements to benefit all Americans nationwide, and advances the Commission's goal of reducing 911 response times, which ultimately saves lives.¹ The Commission adopted rules that give Commercial Mobile Radio Service (CMRS) providers flexibility to choose from a range of options for dispatchable location and z-axis technologies. The rules allow flexibility in the deployment of new location technology to ensure CMRS providers can meet their commitment to supply vertical location information under the timelines and in the geographic areas established in the *Fourth Report and Order* in this proceeding,² while also affording nationwide CMRS providers the option to deploy z-axis technology on a nationwide basis.

Specifically, in the *Sixth Report and Order*, the Commission amended its rules to (a) require that nationwide wireless providers deploy z-axis technology nationwide by April 2025, while affording non-nationwide wireless providers an additional year (i.e., until April 2026) to do so within their service areas; (b) expand the options for wireless providers choosing to deploy z-axis technology to meet the deadlines established in the *Fourth Report and Order*³ for providing vertical location; and (c) require all wireless providers, beginning in January 2022, to provide dispatchable location with wireless 911 calls when it is technically feasible and cost-effective to do so.

II. COMPLIANCE REQUIREMENTS

911 Service Requirements.

A. Z-Axis Capable Devices and Technology Deployment Options (47 CFR § 9.10(i)(2)(ii)(H)-(J) and (M))

- For z-axis capable devices, CMRS providers deploying z-axis technology must comply with the existing z-axis accuracy metric established in the *Fifth Report and Order*.⁴
- Under the amended rules in section 9.10(i)(2)(ii)(M),
 - A z-axis capable device is one that can measure and report vertical location information without a hardware upgrade.
 - For z-axis location solutions that rely on barometric pressure sensor information, only devices that have such sensors installed shall be considered z-axis capable.

¹ *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114, Sixth Report and Order and Order on Reconsideration, 35 FCC Rcd. 7752 (Jul. 17, 2020) (*Sixth Report and Order*), corrected by Erratum (PSSHB Aug. 28, 2020) and Second Erratum (PSSHB Oct. 29, 2020) affirmed by *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114, Order on Reconsideration, FCC 21-11 (Jan. 11, 2021). *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114, Fifth Report and Order and Fifth Further Notice of Proposed Rulemaking, 34 FCC Rcd 11592 (2019), corrected by Erratum (PSSHB Jan. 15, 2020). *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114, Fourth Report and Order, 30 FCC Rcd 1259 (2015), corrected by Erratum (PSSHB Mar. 3, 2015).

² *Wireless E911 Location Accuracy Requirements*, PS Docket No. 07-114, Fourth Report and Order, 30 FCC Rcd 1259 (2015) (*Fourth Report and Order*), corrected by Erratum (PSSHB Mar. 3, 2015).

³ The Small Entity Compliance Guide to the *Fourth Report and Order*, is available at: <https://www.fcc.gov/document/wireless-e911-location-accuracy-requirements>.

⁴ 47 CFR § 9.10(i)(2)(ii)(H) and (I). The Small Entity Compliance Guide to the *Fifth Report and Order* is available at: <https://docs.fcc.gov/public/attachments/DA-20-458A1.pdf>.

- For location solutions that do not require barometric pressure sensor information, both devices with and without barometric sensors shall be considered z-axis capable, provided that they are software-upgradable.
- New options in section 9.10(i)(2)(ii)(I) for CMRS providers to meet the Commission’s vertical location accuracy requirements that supplement the options adopted in prior orders include:
 - Deployment of the technology to cover 80 percent of the population *or* 80 percent of the buildings that exceed three stories in each area (either Cellular Market Area (CMA) or nationwide) where the z-axis technology is used, and,
 - Deployment of z-axis capable handsets enabled with z-axis technology on a nationwide basis (or throughout the CMRS provider’s network footprint, as applicable).
- Section 9.10(i)(2)(ii)(J) sets out the specific criteria that CMRS providers deploying z-axis technology must fulfill before they can certify compliance. Pursuant to section 9.10(i)(2)(ii)(J)(1)-(4) of the rules:
 - CMRS providers must activate all network infrastructure necessary to support z-axis location by z-axis capable devices throughout the deployment area.
 - CMRS providers may deploy z-axis technology upgrades by using over-the-top applications as well as operating system or firmware upgrades.
 - CMRS providers must affirmatively push the z-axis technology to all z-axis capable device models currently on their networks that can receive it and must continue to support the z-axis technology on these devices after deployment.
 - CMRS providers using the handset-based deployment option must make the technology available to existing z-axis capable devices nationwide.
 - CMRS providers using a CMA-based deployment option must make the technology available to all z-axis capable devices in the CMA.
 - CMRS providers must have z-axis technology pre-installed all new z-axis capable devices marketed to consumers.
 - CMRS providers will be deemed in compliance as long as they either pre-install or affirmatively push the location technology to end users so that the user receives a prompt or other notice informing them that the application or service is available and what needs to be done to download and enable the technology on their phone.
 - CMRS providers will be deemed in compliance with z-axis deployment obligations if they make the technology available to end users in accordance with the Commission’s rules, even if the end users decline to use the technology or subsequently disables it.

B. Requirements for Dispatchable Location (47 CFR § 9.10(i)(2)(ii)(L))

- Under the amended rules, CMRS providers that choose to deploy dispatchable location to meet their vertical location obligations in the top 25 and 50 CMAs must ensure that dispatchable location is supported by a sufficient number of dispatchable location reference points (e.g., Wi-Fi access points or Bluetooth beacons) to equal 25 percent of the CMA population.

C. Deadlines for Non-Nationwide CMRS Providers to Deploy Vertical Location (47 CFR § 9.10(i)(2)(ii)(F) and (G))

- Under the amended rules, by January 6, 2022, CMRS providers are required to provide dispatchable location when technically feasible and cost effective to do so.
 - The new dispatchable location requirement is independent of the existing 47 CFR § 9.10(i)(2)(ii)(C) and (D), that allows all CMRS providers to choose whether to deploy dispatchable location or z-axis technology.
- The timelines for compliance with the vertical location rules are as follows for non-nationwide CMRS providers:
 - **January 6, 2022:** all (nationwide and non-nationwide) CMRS providers must provide dispatchable location with wireless E911 calls if it is technically feasible.
 - **April 3, 2022:** non-nationwide CMRS providers serving any of the top 25 CMAs must deploy in those CMAs either (1) dispatchable location, or (2) z-axis technology in compliance with the z-axis accuracy metric.
 - **April 3, 2024:** non-nationwide CMRS providers serving any of the top 50 CMAs must deploy in those CMAs either (1) dispatchable location, or (2) z-axis technology in compliance with the z-axis accuracy metric.
 - **April 3, 2026:** all non-nationwide CMRS providers must deploy throughout their network footprint either (1) dispatchable location, or (2) z-axis technology in compliance with the z-axis accuracy metric.

D. Privacy and Security Certification Requirements (47 CFR § 9.10(i)(4)(iv))

- The amended rules require CMRS providers to certify that neither they nor any third party they are relying on to obtain dispatchable location information will use that information or its associated data for a non-911 purpose, except with prior express consent or as otherwise required by law.
- The certification must state that the CMRS provider and third parties they rely on will implement measures sufficient to safeguard the privacy and security of dispatchable location information.

E. Confidence and Uncertainty (C/U) Data (47 CFR § 9.10(j)(4))

- The amended section 9.10(j)(4) requires that upon meeting the timeframes in section 9.10(i)(2)(ii), CMRS providers shall provide the confidence and uncertainty data for z-axis (vertical) information required in section 9.10(j)(1) with wireless 911 calls that have a dispatchable location.
- Section 9.10(j)(4) also requires that where available to the CMRS provider, CMRS providers shall provide the confidence and uncertainty data for z-axis (vertical) information required in section 9.10(j)(1) with wireless 911 calls that have floor level information.

F. Provision of Live 911 Call and C/U Data to PSAPs (47 CFR § 9.10(k))

- The revised section 9.10(k), requires that CMRS providers record information on all live 911 calls, including but not limited to the positioning source method used to provide a location fix associated with the call.
- CMRS providers must also record the C/U data that they provide pursuant to sections 9.10(j)(1)-(4).
- CMRS providers must make available to PSAPs upon request live call and C/U data and shall retain the data for a period of two years.

III. RECORDKEEPING AND REPORTING REQUIREMENTS

The requirements adopted by the Commission in the *Sixth Report and Order* to ensure that first responders and PSAPs can find 911 callers quickly and accurately when a consumer calls from a multi-story building created additional recordkeeping and reporting obligations for CMRS providers.

- The adopted rule changes involving reporting and recordkeeping make explicit that when CMRS providers provide dispatchable location or floor level information in addition to z-axis information, they must also provide C/U data for the z-axis location.
- The rules require CMRS providers to supply C/U data for vertical location upon request from a PSAP and to retain this information for two years.
- CMRS providers are required to certify that they will not use dispatchable location or associated data for any purpose other than for the purpose of responding to 911 calls, except with written prior consent or as required by law.

The details and specifics of the reporting and recordkeeping requirements associated with the deployment metrics required to certify compliance, the privacy and security certification and live call and C/U data reporting adopted in the *Sixth Report and Order* can be found in Section II of this guide under the Compliance Requirements.

IV. IMPLEMENTATION DATE

Except for rules requiring approval by the Office of Management and Budget (OMB) under the Paperwork Reduction Act (PRA), the rules adopted in the *Sixth Report and Order* became effective on September 28, 2020. The following rules in the *Sixth Report and Order* required approval by OMB under the PRA: sections 9.10(i)(2)(ii)(J)(4), 9.10(i)(4)(iv), 9.10(i)(4)(v), 9.10(j)(4) and 9.10(k).⁵ OMB approved these rules and the Commission published notice in the Federal Register announcing OMB approval and an effective date of April 14, 2021.⁶

V. INTERNET LINKS

A copy of the *Sixth Report and Order* is available at:

<https://docs.fcc.gov/public/attachments/FCC-20-98A1.pdf>

A copy of the first Erratum of the *Sixth Report and Order* is available at:

<https://docs.fcc.gov/public/attachments/DOC-366457A1.pdf>

A copy of the Second Erratum of the *Sixth Report and Order* is available at:

<https://docs.fcc.gov/public/attachments/DA-20-1283A1.pdf>

A copy of the Federal Register Summary of the *Sixth Report and Order* is available at:

<https://www.federalregister.gov/documents/2020/08/28/2020-18795/wireless-e911-location-accuracy-requirements>

A copy of the Small Entity Compliance Guide to the *Fifth Report and Order* is available at:

<https://docs.fcc.gov/public/attachments/DA-20-458A1.pdf>

⁵ 85 Fed. Reg. 53234.

⁶ 86 Fed. Reg. 19582.

A copy of the Small Entity Compliance Guide to the *Fourth Report and Order*, is available at: <https://www.fcc.gov/document/wireless-e911-location-accuracy-requirements>.

A copy of the Federal Register announcement of OMB approval is available at: <https://www.federalregister.gov/documents/2021/04/14/2021-07723/wireless-e911-location-accuracy-requirements>.